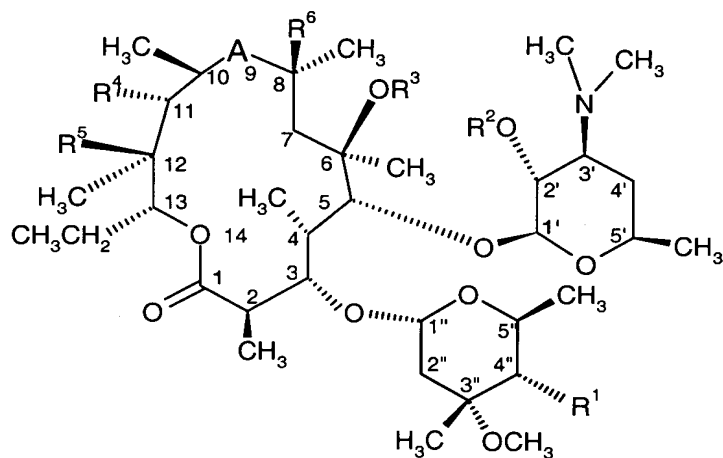


Amendments to the claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original): A compound of formula (I)



(I)

wherein

A is a bivalent radical selected from $-\text{C}(\text{O})-$, $-\text{C}(\text{O})\text{NH}-$, $-\text{NHC}(\text{O})-$, $-\text{N}(\text{R}^7)-\text{CH}_2-$, $-\text{CH}_2-\text{N}(\text{R}^7)-$, $-\text{CH}(\text{NR}^8\text{R}^9)-$ and $-\text{C}(=\text{NR}^{10})-$;

R^1 is $-\text{O}(\text{CH}_2)_d\text{XR}^{11}$;

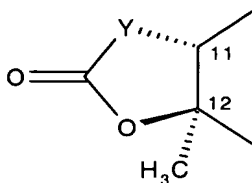
R^2 is hydrogen or a hydroxyl protecting group;

R^3 is hydrogen, C_{1-4} alkyl, or C_{3-6} alkenyl optionally substituted by 9 to 10 membered fused bicyclic heteroaryl;

R^4 is hydroxy, C_{3-6} alkenyloxy optionally substituted by 9 to 10 membered fused bicyclic heteroaryl, or C_{1-6} alkoxy optionally substituted by C_{1-6} alkoxy or $-\text{O}(\text{CH}_2)_e\text{NR}^7\text{R}^{12}$,

R^5 is hydroxy, or

R^4 and R^5 taken together with the intervening atoms form a cyclic group having the following structure:



wherein Y is a bivalent radical selected from $-\text{CH}_2-$, $-\text{CH}(\text{CN})-$, $-\text{O}-$, $-\text{N}(\text{R}^{13})-$ and $-\text{CH}(\text{SR}^{13})-$;

R^6 is hydrogen or fluorine;

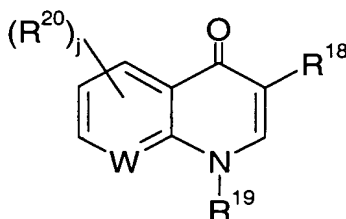
R^7 is hydrogen or C_{1-6} alkyl;

R^8 and R^9 are each independently hydrogen, C_{1-6} alkyl, $-\text{C}(=\text{NR}^{10})\text{NR}^{14}\text{R}^{15}$ or $-\text{C}(\text{O})\text{R}^{14}$, or

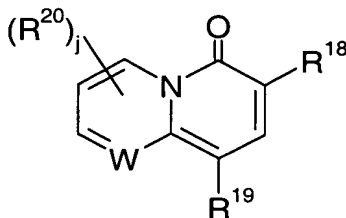
R^8 and R^9 together form $=\text{CH}(\text{CR}^{14}\text{R}^{15})_{\text{aryl}}$, $=\text{CH}(\text{CR}^{14}\text{R}^{15})_{\text{heterocyclyl}}$, $=\text{CR}^{14}\text{R}^{15}$ or $=\text{C}(\text{R}^{14})\text{C}(\text{O})\text{OR}^{14}$, wherein the alkyl, aryl and heterocyclyl groups are optionally substituted by up to three groups independently selected from R^{16} ;

R^{10} is $-\text{OR}^{17}$, C_{1-6} alkyl, $-(\text{CH}_2)_g\text{aryl}$, $-(\text{CH}_2)_g\text{heterocyclyl}$ or $-(\text{CH}_2)_h\text{O}(\text{CH}_2)_i\text{OR}^7$, wherein each R^{10} group is optionally substituted by up to three groups independently selected from R^{16} ;

R^{11} is a heterocyclic group having the following structure:



or



R^{12} is hydrogen or C_{1-6} alkyl;

R¹³ is hydrogen or C₁₋₄alkyl optionally substituted by a group selected from optionally substituted phenyl, optionally substituted 5 or 6 membered heteroaryl and optionally substituted 9 to 10 membered fused bicyclic heteroaryl;

R¹⁴ and R¹⁵ are each independently hydrogen or C₁₋₆alkyl;

R¹⁶ is halogen, cyano, nitro, trifluoromethyl, azido, -C(O)R²¹, -C(O)OR²¹, -OC(O)R²¹, -OC(O)OR²¹, -NR²²C(O)R²³, -C(O)NR²²R²³, -NR²²R²³, hydroxy, C₁₋₆alkyl, -S(O)_kC₁₋₆alkyl, C₁₋₆alkoxy, -(CH₂)_maryl or -(CH₂)_mheteroaryl, wherein the alkoxy group is optionally substituted by up to three groups independently selected from -NR¹⁴R¹⁵, halogen and -OR¹⁴, and the aryl and heteroaryl groups are optionally substituted by up to five groups independently selected from halogen, cyano, nitro, trifluoromethyl, azido, -C(O)R²⁴, -C(O)OR²⁴, -OC(O)OR²⁴, -NR²⁵C(O)R²⁶, -C(O)NR²⁵R²⁶, -NR²⁵R²⁶, hydroxy, C₁₋₆alkyl and C₁₋₆alkoxy;

R¹⁷ is hydrogen, C₁₋₆alkyl, C₃₋₇cycloalkyl, C₃₋₆alkenyl or a 5 or 6 membered heterocyclic group, wherein the alkyl, cycloalkyl, alkenyl and heterocyclic groups are optionally substituted by up to three substituents independently selected from optionally substituted 5 or 6 membered heterocyclic group, optionally substituted 5 or 6 membered heteroaryl, -OR²⁷, -S(O)_nR²⁷, -NR²⁷R²⁸, -CONR²⁷R²⁸, halogen and cyano;

R¹⁸ is hydrogen, -C(O)OR²⁹, -C(O)NHR²⁹, -C(O)CH₂NO₂ or -C(O)CH₂SO₂R⁷;

R¹⁹ is hydrogen, C₁₋₄alkyl optionally substituted by hydroxy or C₁₋₄alkoxy, C₃₋₇cycloalkyl, or optionally substituted phenyl or benzyl;

R²⁰ is halogen, C₁₋₄alkyl, C₁₋₄thioalkyl, C₁₋₄alkoxy, -NH₂, -NH(C₁₋₄alkyl) or -N(C₁₋₄alkyl)₂;

R²¹ is hydrogen, C₁₋₁₀alkyl, -(CH₂)_paryl or -(CH₂)_pheteroaryl;

R²² and R²³ are each independently hydrogen, -OR¹⁴, C₁₋₆alkyl, -(CH₂)_qaryl or -(CH₂)_qheterocyclyl;

R²⁴ is hydrogen, C₁₋₁₀alkyl, -(CH₂)_raryl or -(CH₂)_rheteroaryl;

R²⁵ and R²⁶ are each independently hydrogen, -OR¹⁴, C₁₋₆alkyl, -(CH₂)_saryl or -(CH₂)_sheterocyclyl;

R²⁷ and R²⁸ are each independently hydrogen, C₁₋₄alkyl or C₁₋₄alkoxyC₁₋₄alkyl;

R²⁹ is hydrogen,
C₁₋₆alkyl optionally substituted by up to three groups independently selected from halogen, cyano, C₁₋₄alkoxy optionally substituted by phenyl or C₁₋

C_4 alkoxy, $-\text{C}(\text{O})\text{C}_{1-6}\text{alkyl}$, $-\text{C}(\text{O})\text{OC}_{1-6}\text{alkyl}$, $-\text{OC}(\text{O})\text{C}_{1-6}\text{alkyl}$, $-\text{OC}(\text{O})\text{OC}_{1-6}\text{alkyl}$, $-\text{C}(\text{O})\text{NR}^{32}\text{R}^{33}$, $-\text{NR}^{32}\text{R}^{33}$ and phenyl optionally substituted by nitro or $-\text{C}(\text{O})\text{OC}_{1-6}\text{alkyl}$,
 $-(\text{CH}_2)_w\text{C}_{3-7}\text{cycloalkyl}$,
 $-(\text{CH}_2)_w\text{heterocyclyl}$,
 $-(\text{CH}_2)_w\text{heteroaryl}$,
 $-(\text{CH}_2)_w\text{aryl}$,
 $\text{C}_{3-6}\text{alkenyl}$, or
 $\text{C}_{3-6}\text{alkynyl}$;

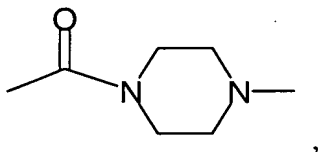
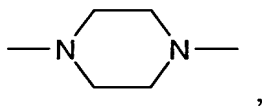
R^{30} is hydrogen, $\text{C}_{1-4}\text{alkyl}$, $\text{C}_{3-7}\text{cycloalkyl}$, optionally substituted phenyl or benzyl, acetyl or benzoyl;

R^{31} is hydrogen or R^{20} , or R^{31} and R^{19} are linked to form the bivalent radical $-\text{O}(\text{CH}_2)_2-$ or $-(\text{CH}_2)_t-$;

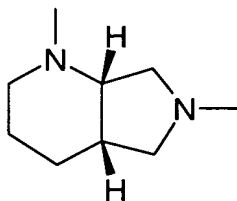
R^{32} and R^{33} are each independently hydrogen or $\text{C}_{1-6}\text{alkyl}$ optionally substituted by phenyl or $-\text{C}(\text{O})\text{OC}_{1-6}\text{alkyl}$, or

R^{32} and R^{33} , together with the nitrogen atom to which they are bound, form a 5 or 6 membered heterocyclic group optionally containing one additional heteroatom selected from oxygen, nitrogen and sulfur;

X is $-\text{U}(\text{CH}_2)_v\text{B}-$, $-\text{U}(\text{CH}_2)_v-$ or a group selected from:



and



U and B are independently a divalent radical selected from $-N(R^{30})-$, $-O-$, $-S(O)_2-$, $-N(R^{30})C(O)-$, $-C(O)N(R^{30})-$ and $-N[C(O)R^{30}]-$;

W is $-C(R^{31})-$ or a nitrogen atom;

d is an integer from 2 to 6;

e is an integer from 2 to 4;

f, g, h, m, p, q, r, s and w are each independently integers from 0 to 4;

i is an integer from 1 to 6;

j, k, n and z are each independently integers from 0 to 2;

t is 2 or 3;

v is an integer from 1 to 8;

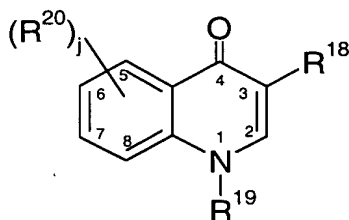
or a pharmaceutically acceptable derivative thereof.

2. (Original): A compound according to claim 1 wherein A is $-C(O)-$ or $-N(R^7)-CH_2-$.

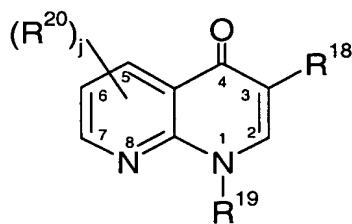
3. (Currently amended): A compound according to claim 1 ~~or claim 2~~ wherein X is $-U(CH_2)_vB-$ or $-U(CH_2)_v$.

4. (Currently amended): A compound according to claim 1 ~~any one of the preceding claims~~ wherein d is 2 or 3.

5. (Currently amended): A compound according to ~~any one of the preceding claims~~ claim 1 wherein R^{11} is a heterocyclic group of the following formula:

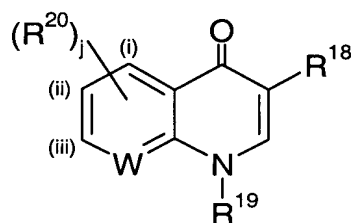


or



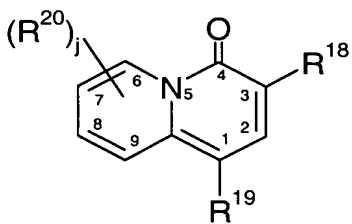
wherein the heterocyclic is linked in the 6 or 7 position and j, R¹⁸, R¹⁹ and R²⁰ are as defined in claim 1;

a heterocyclic group of the following formula:



wherein the heterocyclic is linked in the (ii) or (iii) position, W is -C(R³¹)- and R³¹ and R¹⁹ are linked to form the bivalent radical -(CH₂)_t- as defined in claim 1, and j, R¹⁸, R¹⁹ and R²⁰ are as defined in claim 1; or

a heterocyclic group of the following formula:



wherein the heterocyclic is linked in the 7 or 8 position and j, R¹⁸, R¹⁹ and R²⁰ are as defined in claim 1.

6. (Original): A compound according to claim 1 as defined in any one of Examples 1 to 42, or a pharmaceutically acceptable derivative thereof.

7. (Original): A compound selected from:

4"-O-(2-{[2-(3-carboxy-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-quinolin-7-ylamino)-ethyl]-methylamino}-ethyl)-6-O-methyl-erythromycin A 11,12-carbonate;
4"-O-(3-{[2-(3-carboxy-1-cyclopropyl-6-fluoro-4-oxo-1,4-dihydro-quinolin-7-ylamino)ethyl]-methylamino}-propyl)-6-O-methyl-erythromycin A 11,12-carbonate;
4"-O-{3-[2-(2-carboxy-1-oxo-6,7-dihydro-1*H*,5*H*-pyrido[3,2,1-*ij*]quinoline-9-yloxy)-ethylamino]-propyl}-6-O-methyl-erythromycin A 11,12-carbonate;
4"-O-(3-{[3-(3-carboxy-1-ethyl-4-oxo-1,4-dihydro-quinolin-6-yl)propyl]-methylamino}-propyl)-6-O-methyl-erythromycin A 11,12-carbonate;
4"-O-(3-{[2-(3-carboxy-1-ethyl-6-fluoro-4-oxo-1,4-dihydro-[1,8]naphthyridin-7-ylamino)ethyl]-methylamino}-propyl)-6-O-methyl-erythromycin A 11,12-carbonate;
4"-O-{2-[2-(3-carboxy-1-ethyl-6-fluoro-4-oxo-1,4-dihydro-[1,8]naphthyridin-7-ylamino)ethyl]-methylamino}-ethyl}-6-O-methyl-erythromycin A;
4"-O-{3-[3-(3-carboxy-1-ethyl-4-oxo-1,4-dihydro-quinolin-6-yl)-propyl]-methylamino]-propyl}-6-O-methyl-11-desoxy-11-(*R*)-amino-erythromycin A 11,12-carbamate;
4"-O-{3-[2-(3-carboxy-1-ethyl-4-oxo-1,4-dihydro-quinolin-6-ylsulfanyl)-ethyl]-methylamino]-propyl}-6-O-methyl-11-desoxy-11-(*R*)-amino-erythromycin A 11,12-carbamate;
4"-O-{3-[2-(3-carboxy-7-chloro-1-cyclopropyl-4-oxo-1,4-dihydro-quinolin-6-ylamino)-ethylcarbamoyl]-propyl}-azithromycin;
4"-O-{2-[2-(3-carboxy-6-fluoro-1-cyclopropyl-4-oxo-1,4-dihydro-quinolin-7-ylamino)-ethylamino]-ethyl}-azithromycin 11,12-cyclic carbonate;
4"-O-{2-[2-(3-carboxy-7-chloro-1-cyclopropyl-4-oxo-1,4-dihydro-quinolin-6-ylamino)-ethylamino]-ethyl}-azithromycin; and
4"-O-{2-[2-(3-carboxy-6-fluoro-1-cyclopropyl-4-oxo-1,4-dihydro-quinolin-7-ylamino)-ethylamino]-ethyl}-azithromycin;
or a pharmaceutically acceptable derivative thereof.

8. (Original): A process for the preparation of a compound as claimed in claim 1 which comprises:

a) reacting a compound of formula (II)



with a suitable amine (IIIa) or (IIIb), wherein B^a and R^{11a} are B and R¹¹ as defined in claim 1 or groups convertible to B and R¹¹;

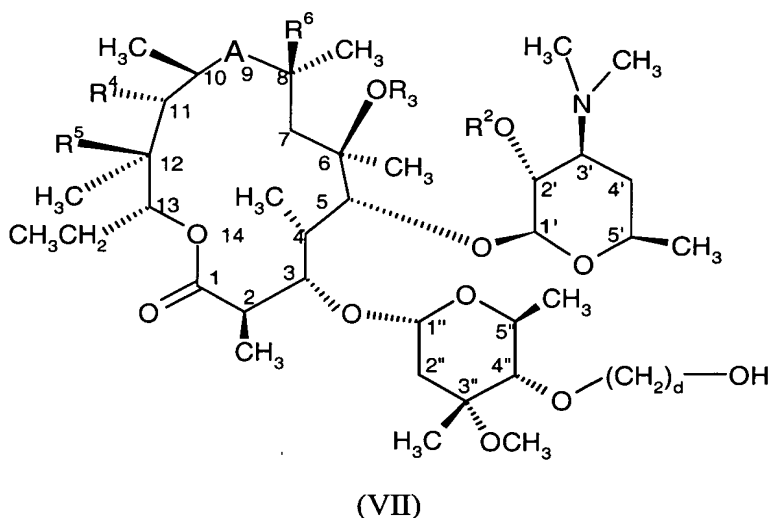
b) reacting a compound of formula (V)



with a compound of formula X^aR^{11a} (IV), wherein R^{11a} is R^{11} as defined in claim 1 or a group convertible to R^{11} and X^a is $-U(CH_2)_v-$ or $-U(CH_2)_vB-$, or a group convertible to $-U(CH_2)_v-$ or $-U(CH_2)_vB-$, in which U is a group selected from $-N(R^{30})-$ and $-S-$, and L is suitable leaving group, to produce a compound of formula (I) wherein U is a group selected from $-N(R^{30})-$ and $-S-$;

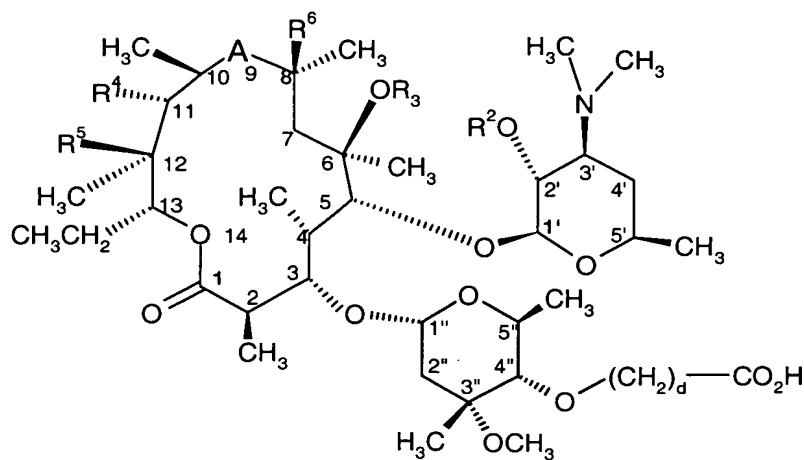
a) converting one compound of formula (I) into another compound of formula (I);

d) where U is $-O-$, reacting a compound of formula (VII)



with a suitable compound of formula X^aR^{11a} in the presence of a catalyst; or

e) where U is $-C(O)N(R^{30})-$, reacting a compound of formula (VIII)



(VIII)

with a suitable amine compound,

and thereafter, if required, subjecting the resulting compound to one or more of the following operations:

- i) removal of the protecting group R²,
- ii) conversion of X^aR^{11a} to XR¹¹,
- iii) conversion of B^aR^{11a} to R¹¹,
- iv) conversion of R^{11a} to R¹¹,

and

- v) conversion of the resultant compound of formula (I) into a pharmaceutically acceptable derivative thereof.

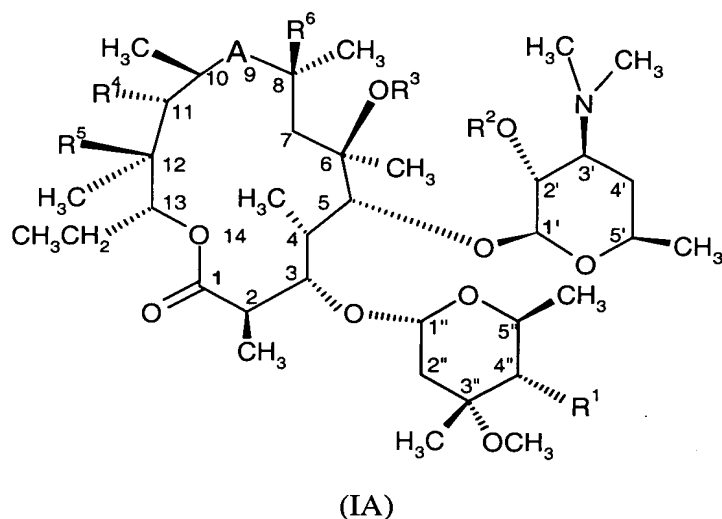
9. (Currently amended): A compound as claimed in claim 1 ~~any one of claims 1 to 7~~ for use in therapy.

Claims 10 and 11 (Cancelled).

12. (Currently amended): A method for the treatment of the human or non-human animal body to combat microbial infection comprising administration to a body in need of such treatment of an effective amount of a compound as claimed in claim 1 ~~any one of claims 1 to 7~~.

13. (Currently amended): A pharmaceutical composition comprising at least one compound as claimed in claim 1 ~~any one of claims 1 to 7~~ in association with a pharmaceutically acceptable excipient, diluent and/or carrier.

14. (Original): A compound of formula (IA)



wherein

A is a bivalent radical selected from $-\text{C}(\text{O})-$, $-\text{C}(\text{O})\text{NH}-$, $-\text{NHC}(\text{O})-$, $-\text{N}(\text{R}^7)-\text{CH}_2-$, $-\text{CH}_2-\text{N}(\text{R}^7)-$, $-\text{CH}(\text{NR}^8\text{R}^9)-$ and $-\text{C}(=\text{NR}^{10})-$;

R^1 is $-\text{O}(\text{CH}_2)_d\text{XR}^{11}$;

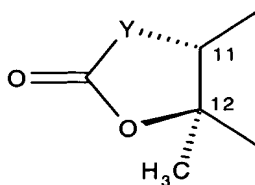
R^2 is hydrogen or a hydroxyl protecting group;

R^3 is hydrogen, C_{1-4} alkyl, or C_{3-6} alkenyl optionally substituted by 9 to 10 membered fused bicyclic heteroaryl;

R^4 is hydroxy, C_{3-6} alkenyloxy optionally substituted by 9 to 10 membered fused bicyclic heteroaryl, or C_{1-6} alkoxy optionally substituted by C_{1-6} alkoxy or $-\text{O}(\text{CH}_2)_e\text{NR}^7\text{R}^{12}$,

R^5 is hydroxy, or

R^4 and R^5 taken together with the intervening atoms form a cyclic group having the following structure:



wherein Y is a bivalent radical selected from $-\text{CH}_2-$, $-\text{CH}(\text{CN})-$, $-\text{O}-$, $-\text{N}(\text{R}^{13})-$ and $-\text{CH}(\text{SR}^{13})-$;

R^6 is hydrogen or fluorine;

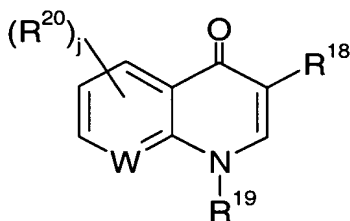
R^7 is hydrogen or C_{1-6} alkyl;

R^8 and R^9 are each independently hydrogen, C_{1-6} alkyl, $-\text{C}(=\text{NR}^{10})\text{NR}^{14}\text{R}^{15}$ or $-\text{C}(\text{O})\text{R}^{14}$, or

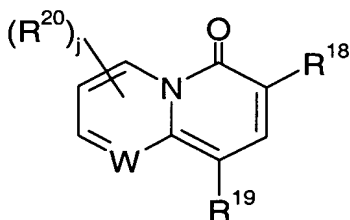
R^8 and R^9 together form $=\text{CH}(\text{CR}^{14}\text{R}^{15})_{\text{aryl}}$, $=\text{CH}(\text{CR}^{14}\text{R}^{15})_{\text{heterocyclyl}}$, $=\text{CR}^{14}\text{R}^{15}$ or $=\text{C}(\text{R}^{14})\text{C}(\text{O})\text{OR}^{14}$, wherein the alkyl, aryl and heterocyclyl groups are optionally substituted by up to three groups independently selected from R^{16} ;

R^{10} is $-\text{OR}^{17}$, C_{1-6} alkyl, $-(\text{CH}_2)_g\text{aryl}$, $-(\text{CH}_2)_g\text{heterocyclyl}$ or $-(\text{CH}_2)_h\text{O}(\text{CH}_2)_i\text{OR}^7$, wherein each R^{10} group is optionally substituted by up to three groups independently selected from R^{16} ;

R^{11} is a heterocyclic group having the following structure:



or



R^{12} is hydrogen or C_{1-6} alkyl;

R¹³ is hydrogen or C₁₋₄alkyl substituted by a group selected from optionally substituted phenyl, optionally substituted 5 or 6 membered heteroaryl and optionally substituted 9 to 10 membered fused bicyclic heteroaryl;

R¹⁴ and R¹⁵ are each independently hydrogen or C₁₋₆alkyl;

R¹⁶ is halogen, cyano, nitro, trifluoromethyl, azido, -C(O)R²¹, -C(O)OR²¹, -OC(O)R²¹, -OC(O)OR²¹, -NR²²C(O)R²³, -C(O)NR²²R²³, -NR²²R²³, hydroxy, C₁₋₆alkyl, -S(O)_kC₁₋₆alkyl, C₁₋₆alkoxy, -(CH₂)_maryl or -(CH₂)_mheteroaryl, wherein the alkoxy group is optionally substituted by up to three groups independently selected from -NR¹⁴R¹⁵, halogen and -OR¹⁴, and the aryl and heteroaryl groups are optionally substituted by up to five groups independently selected from halogen, cyano, nitro, trifluoromethyl, azido, -C(O)R²⁴, -C(O)OR²⁴, -OC(O)OR²⁴, -NR²⁵C(O)R²⁶, -C(O)NR²⁵R²⁶, -NR²⁵R²⁶, hydroxy, C₁₋₆alkyl and C₁₋₆alkoxy;

R¹⁷ is hydrogen, C₁₋₆alkyl, C₃₋₇cycloalkyl, C₃₋₆alkenyl or a 5 or 6 membered heterocyclic group, wherein the alkyl, cycloalkyl, alkenyl and heterocyclic groups are optionally substituted by up to three substituents independently selected from optionally substituted 5 or 6 membered heterocyclic group, optionally substituted 5 or 6 membered heteroaryl, -OR²⁷, -S(O)_nR²⁷, -NR²⁷R²⁸, -CONR²⁷R²⁸, halogen and cyano;

R¹⁸ is hydrogen, -C(O)OR²⁹, -C(O)NHR²⁹ or -C(O)CH₂NO₂;

R¹⁹ is hydrogen, C₁₋₄alkyl optionally substituted by hydroxy or C₁₋₄alkoxy, C₃₋₇cycloalkyl, or optionally substituted phenyl or benzyl;

R²⁰ is halogen, C₁₋₄alkyl, C₁₋₄thioalkyl, C₁₋₄alkoxy, -NH₂, -NH(C₁₋₄alkyl) or -N(C₁₋₄alkyl)₂;

R²¹ is hydrogen, C₁₋₁₀alkyl, -(CH₂)_paryl or -(CH₂)_pheteroaryl;

R²² and R²³ are each independently hydrogen, -OR¹⁴, C₁₋₆alkyl, -(CH₂)_qaryl or -(CH₂)_qheterocyclyl;

R²⁴ is hydrogen, C₁₋₁₀alkyl, -(CH₂)_raryl or -(CH₂)_rheteroaryl;

R²⁵ and R²⁶ are each independently hydrogen, -OR¹⁴, C₁₋₆alkyl, -(CH₂)_saryl or -(CH₂)_sheterocyclyl;

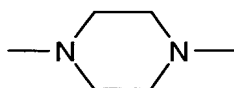
R²⁷ and R²⁸ are each independently hydrogen, C₁₋₄alkyl or C₁₋₄alkoxyC₁₋₄alkyl;

R²⁹ is hydrogen or C₁₋₆alkyl optionally substituted by up to three groups independently selected from halogen, C₁₋₄alkoxy, -OC(O)C₁₋₆alkyl and -OC(O)OC₁₋₆alkyl;

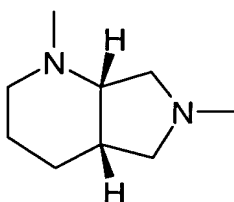
R³⁰ is hydrogen, C₁₋₄alkyl, C₃₋₇cycloalkyl, optionally substituted phenyl or benzyl, acetyl or benzoyl;

R³¹ is hydrogen or R²⁰, or R³¹ and R¹⁹ are linked to form the bivalent radical -O(CH₂)₂- or -(CH₂)_t-;

X is -U(CH₂)_vB-, -U(CH₂)_v- or a group selected from:



and



U and B are independently a divalent radical selected from -N(R³⁰)-, -O-, -S(O)_z-, -N(R³⁰)C(O)-, -C(O)N(R³⁰)- and -N[C(O)R³⁰]-;

W is -C(R³¹)- or a nitrogen atom;

d is an integer from 2 to 6;

e is an integer from 2 to 4;

f, g, h, m, p, q, r and s are each independently integers from 0 to 4;

i is an integer from 1 to 6;

j, k, n and z are each independently integers from 0 to 2;

t is 2 or 3;

v is an integer from 2 to 8;

or a pharmaceutically acceptable derivative thereof.